

MAINTAINING HYDRATION AND ELECTROLYTE BALANCE

CARE PROCESS STEP	EXPECTATIONS	RATIONALE
RECOGNITION/ASSESSMENT		
<ul style="list-style-type: none"> - Did the staff review and define the individual's hydration status? 	<ul style="list-style-type: none"> - The staff should review and define each resident's hydration status, using a consistent protocol (for example, see AMDA Dehydration and Fluid Maintenance CPG, p. 11, Table 6). - When the staff and practitioner identify situations where an individual's hydration is at risk or may be impaired, they should seek additional information such as current or subsequent changes in food or fluid intake, level of consciousness, mental status, or urine output, or rapid or sudden changes in body weight. 	<ul style="list-style-type: none"> - Impaired hydration, or risk for it, is common among residents of long-term care facilities. - Hydration issues can be identified and addressed successfully by using a systematic approach. - No physical signs and symptoms are sufficiently reliable (sensitive or specific) indicators of impaired hydration. - Staff should not rely excessively on signs of advanced dehydration such as sunken eyes and tenting of skin. - Clinical observation of hydration status--unlike nutritional status--may not suffice, and adequate recognition of hydration management may require lab tests. - Weight, especially short-term or rapid weight change, can be a helpful indicator of hydration status. - For hydration, the amount and rate of weight change are relevant (1 liter of fluid = 1kg = 2.2 pounds). - Intake measurements can be fairly accurate and helpful, but output measurements are not as reliable.
<ul style="list-style-type: none"> - Did the staff and/or practitioner identify existing fluid and electrolyte imbalance? 	<ul style="list-style-type: none"> - The staff and practitioner should identify impaired hydration and any effects (lethargy, change in function, altered mental status, etc.) of existing fluid and electrolyte imbalance. - If the staff suspect impaired hydration, they should notify a physician within 24 hours to help evaluate the situation. - The staff and practitioner should consider fluid and 	<ul style="list-style-type: none"> - In some individuals, signs and symptoms of fluid and electrolyte imbalance are nonspecific and may resemble those caused by other conditions such as adverse drug reactions (ADRs) and acute infections. - Fluid and electrolyte imbalance should be considered when nonspecific condition changes including lethargy, falls, anorexia, etc. are not readily explained by other

	<p>electrolyte imbalance when a significant condition change occurred that could not be readily explained by another cause.</p> <ul style="list-style-type: none"> - The practitioner should order appropriate laboratory evaluation, including BUN, creatinine, electrolytes and other relevant tests (see AMDA Dehydration and Fluid Maintenance CPG, p. 15, Table 11). Testing may need to be done rapidly if there is an acute change of condition or if significant fluid and electrolyte imbalance is suspected. - In someone with suspected or confirmed fluid and electrolyte imbalance, the practitioner and staff should clarify the type of imbalance as follows: 1) primarily fluid deficit; 2) primarily sodium deficit; 3) combined water and sodium deficit; 4) excess water retention or intake; or 5) excess water and salt retention. Alternatively, the physician should explain why it was not possible or relevant to identify the nature of the problem (see AMDA Dehydration and Fluid Maintenance CPG, p. 13, Table 8). 	<p>conditions or do not respond readily to interventions aimed at other presumed diagnoses.</p> <ul style="list-style-type: none"> - Lab tests (especially electrolytes, BUN and creatinine; possibly others such as serum osmolality or urine sodium) are an essential supplement to any physical evidence to assess fluid balance. - Correct classification of a fluid and electrolyte imbalance is the basis for choosing the correct treatment.
- Did the staff and/or practitioner identify risk factors for developing fluid and electrolyte imbalance?	<ul style="list-style-type: none"> - The staff and practitioner should identify the individual's risk for subsequent fluid and electrolyte imbalance, including impaired ability to take adequate fluids without assistance. - The facility should be able to explain the basis for any conclusions that risk factors could not or should not be identified or addressed. 	<ul style="list-style-type: none"> - Many situations or factors can affect hydration risk, including persistent vomiting, diarrhea, fever, infection taking diuretics and ACE inhibitors, delirium, dementia, depression, and functional impairments. - Some risk factors are temporary while others are enduring.
DIAGNOSIS/CAUSE IDENTIFICATION		
- Did the staff and/or practitioner evaluate likely cause(s) of fluid and electrolyte imbalance?	<ul style="list-style-type: none"> - The practitioner and staff should attempt to identify causes of fluid and electrolyte imbalance, relative to the following categories: 1) inadequate intake (e.g., dysphagia, dementia, delirium, impaired ability to take food without assistance); 2) excessive loss (e.g., diarrhea, fever, diuretics); 3) impairment of the body's ability to balance and manage fluids/electrolytes (e.g., renal failure; heart failure; cerebrovascular accident; 	<ul style="list-style-type: none"> - Many causes of fluid and electrolyte imbalance and hydration risk can be addressed, at least partially, while others may not be modifiable. - Fluid and electrolyte imbalance is a common cause of rapid or short-term weight loss and acute symptoms, and constitutes a medical issue that requires a health care practitioner's involvement.

	<p>syndrome of inappropriate antidiuretic hormone secretion; diuretics, ACE inhibitors, and other medications); and 4) combinations of the above.</p> <ul style="list-style-type: none"> - The staff and practitioner should recognize and evaluate fluid and electrolyte imbalance as a possible indicator of an underlying problem (e.g., adverse drug reaction, infection, etc.). - Alternatively, the staff and practitioner should document why causes of fluid and electrolyte imbalance could not be or should not have been sought. 	
- Did the staff and practitioner evaluate relevant information and provide a clinically pertinent basis for their conclusions?	<ul style="list-style-type: none"> - In order to identify the urgency of interventions, the staff and practitioner should characterize an individual's fluid and electrolyte imbalance as mild, moderate, or severe based on pertinent information including lab tests and other relevant criteria (see AMDA Dehydration and Fluid Maintenance CPG (p. 10, Table 5). - The staff and practitioner should identify end-stage, terminal, or other untreatable conditions affecting fluid intake and hydration status, and document factors (for example, end-of-life situation) that are felt to make it difficult or inappropriate to try to maintain or improve hydration balance. 	- The facility should involve health care practitioners who can evaluate complex evidence, perform a differential diagnosis, and clarify the nature, severity, and causes of any fluid and electrolyte imbalance.
TREATMENT/MANAGEMENT		
- Did the staff provide or assist with necessary hydration?	<ul style="list-style-type: none"> - The staff should ensure access to hydration for all individuals (permit or offer access to at least approximately 1,500 cc/day or another amount based on individual documented needs or condition) and should provide, or assist with, hydration for those who cannot obtain it independently. - For those with fluid and electrolyte imbalance, the staff and practitioner should provide interventions based on the nature, severity, and causes of fluid and electrolyte imbalance or risk and the impact of fluid and electrolyte imbalance on an 	<ul style="list-style-type: none"> - Significant fluid and electrolyte imbalance should be corrected in a time frame consistent with the severity and nature of the problem. - Dietary restrictions, therapeutic diets, and modified consistency diets may be unnecessary, may inhibit adequate fluid intake and may not be consistent with the resident's wishes or goals. - Offering access to fluids should be based on an individualized assessment of fluid needs, and does not

	<p>individual's function and quality of life.</p> <ul style="list-style-type: none"> - The staff and practitioner should review the resident's condition, needs, wishes, values, goals, and prognosis, and identify and provide consistent interventions. This includes decisions about possibly altering fluid consistency (i.e., thickened liquids). 	<p>necessarily mean pushing fluids on individuals who decline them beyond a certain amount, or whose hydration status remains stable on a lesser daily fluid intake.</p>
<p>- Did the staff and practitioner address underlying causes of fluid and electrolyte imbalance?</p>	<ul style="list-style-type: none"> - The staff and practitioner should manage identified factors causing or contributing to fluid and electrolyte imbalance; for example, medical conditions or medications causing lethargy and confusion leading to decreased fluid intake. - The staff and practitioner should consider the feasibility of managing each significant identified risk factor regardless of how many there are or any total scores on an aggregate risk scale. - The staff and practitioner should manage significant fluid and electrolyte imbalances consistent with the nature, causes, and severity, OR document why likely causes could not or should not be addressed (for example, terminal condition). - The staff and practitioner should address medications known to affect fluid and electrolyte balance, appetite, level of consciousness, and other factors directly or indirectly affecting fluid and electrolyte status, OR provide clinically valid reasons why those medications could not be changed. - The staff and practitioner should document the basis for 1) any conclusions that the individual should not receive aggressive rehydration or management of significant fluid and electrolyte imbalance; for example, a terminal condition or wishes stated in advance directives; and 2) decisions not to modify medications known to be associated directly with significant fluid and electrolyte imbalance or indirectly by causing anorexia, changes in mentation and level of consciousness, etc. 	<ul style="list-style-type: none"> - Interventions may relate to diverse causes, including need for assistance to obtain fluids, reduction of medication side effects, or implementing other relevant alternatives based on an individual's specific situation and causes of insufficient fluid intake. - Diverse medications can cause anorexia or symptoms such as lethargy or confusion that can lead to or exacerbate fluid and electrolyte imbalance. (Please cross-reference table #6 in Altered Nutritional Status CPG.) - When someone has a significant fluid and electrolyte imbalance, the problems for which other medications were instituted are often less important in the short-term than the immediate issue of correcting fluid and electrolyte imbalance and maintaining adequate hydration.

MONITORING		
<ul style="list-style-type: none"> - Did the staff and/or practitioner review and adjust interventions based on appropriate rationale? 	<ul style="list-style-type: none"> - The staff should evaluate the effectiveness of any interventions to manage fluid and electrolyte balance or correct imbalances; for example, analysis of blood work, calculation of fluid deficits, or subsequent changes in mentation or function. - The staff should document the basis for deciding to maintain, adjust, or stop interventions related to hydration status and the causes of fluid and electrolyte imbalance. 	<ul style="list-style-type: none"> - Subsequent adjustment of interventions will depend on progress, underlying causes, overall condition, prognosis, etc. - Unmodifiable conditions and circumstances may impede or preclude improved or stabilized hydration status, and should be noted. - Despite divergent views on the topic, decisions about the use of artificial hydration should be made in conjunction with the resident and/or appropriate substitute decision maker. Depending on a person's wishes, prognosis, and so on, it remains both ethically and medically acceptable to not use artificial hydration, especially for those who are in end-of-life situations.
<ul style="list-style-type: none"> - Did the staff and/or practitioner monitor the subsequent course of impaired hydration or other significant fluid and electrolyte imbalance or risk? 	<ul style="list-style-type: none"> - The staff should document ongoing monitoring of individuals who have had previous episodes of fluid and electrolyte imbalance and who continue to have risks for fluid and electrolyte imbalance. 	<ul style="list-style-type: none"> - "Monitoring" means that the facility's staff seeks evidence of subsequent changes in food and fluid intake, level of consciousness, function, body weight, blood chemistries, etc. that enable conclusions about a person's hydration status and electrolyte balance and the subsequent adjustment of interventions. - Lab testing may be helpful, in addition to other approaches to try and clarify current hydration status.